PB85-213924

Superfund Record of Decision (EPA Region 5)
Laskin Poplar Oil Site
Jefferson, Ohio, August 1984

(U.S.) Environmental Protection Agency
Washington, DC

9 Aug 84

U.S. Department of Commerce
National Technical Information Service
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EPA/ROD/R05-84/004
August 1984

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EPA

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Laskin Poplar Oil Site, OH

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15. SUPPLEMENTARY NOTES

16. ABSTRACT

The Laskin Poplar Oil site includes several storage tanks and retention ponds of waste oils, on about 9 acres in northeastern Ohio, Ashtabula County. The waste oils contain PCBs, phenols, PAHS, sludges and other organics, and both soils and surface waters have become contaminated. The site has been involved in mudslides and flooding, and runoff and seepage into Cemetery Creek pose the most obvious and immediate threat of environmental contamination.

The cost-effective remedial alternative for this site includes: off-siteincineration of contaminated water and waste oil above and below 50 ppm PCB, using established technology. The capitol cost for the selected alternative was estimated to be $1,043,000; no O&M activities were required for this Final Action.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Record of Decision Laskin Poplar Oil Site, OH Contaminated media: sw, soil, oil Key contaminants: PCBs, PAHs, phenols, waste oil, sludges		

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RECORD OF DECISION

INITIAL REMEDIAL ALTERNATIVE SELECTION

Site: Laskin/Poplar Oil, Jefferson, Ohio

Documents Reviewed

I have reviewed the following documents describing the analysis of cost-effectiveness of remedial alternatives of the Laskin/Poplar Oil site:

- Focused Feasibility Study, Laskin/Poplar Oil Site
- Summary of Remedial Alternative Selection
- Responsiveness Summary
- Letter from Robert H. Maynard, Director, Ohio Environmental Protection Agency

Description of Selected Remedy

- Removal of contaminated water from the site for incineration with the oil
- Removal of oil contaminated with less than 50 ppm PCB's for incineration.
- Removal of oil with greater than 50 ppm PCB's for incineration

Declarations

Consistent with the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), and the National Contingency Plan (40 CFR Part 300), I have determined that the removal and off-site disposal of all liquids in the above ground and in ground tanks is a cost-effective initial remedial measure necessary to minimize the release of hazardous substances so they do not migrate to cause harm to public health, welfare or the environment. The State of Ohio has been consulted and agrees with the selected remedy. This action will require no future operation and maintenance activities.

I have also determined that the action being taken is consistent with a permanent remedy at the site, and is appropriate when balanced against the availability of Trust Fund monies for use at other sites. In addition, the off-site transport and destruction is more cost-effective than other remedial actions.

August 9th 1984
Date

Valdas V. Adamkus
Regional Administrator

Attachment

Responsiveness Summary
Laskin/Poplar Oil

Past Federal cleanup activities have resulted in mitigation of the most imminent health hazards at the Laskin/Poplar Oil site. Several emergency actions were taken after the site was discovered and during critical periods such as mudslides and flooding. A Superfund Planned Removal action was conducted at the site between July and October 1982. This action resulted in the removal of 302,000 gallons of waste oil for incineration, treatment and release of 430,000 gallons of contaminated water and solidification of 205,000 gallons of sludge, which were placed into Tank No. 4.

Prior to the initiation of the Planned Removal, the citizens were briefed at a public meeting on the proposed actions which included removal of the waste oil for incineration. There was complete acceptance of any action which removed the contaminated materials for proper off-site disposal.

The Focused Feasibility Study addresses 450,000 gallons of contaminated liquids remaining at the site and concluded that they must be removed from the site as soon as possible, to protect the public health, welfare and the environment. The study recommends that all of the these liquids be removed for incineration.

The study was made available at the public libraries in Jefferson, Ohio and Ashtabula, Ohio. A press release indicating the study's availability was issued to the Cleveland newspapers and to local newspapers. A copy of the study was also mailed to citizens who have indicated an interest in the site and to the steering committee which represents the generators of the waste.

There were no responses received as a result of this comment period, which extended from May 11, 1984 to May 27, 1984.

Summary of Remedial Alternative Selection
Laskin/Poplar Oil
Jefferson, Ohio

SITE DESCRIPTION

The Laskin Poplar Oil site of about 9 acres is in northeastern Ohio within Jefferson Township in Ashtabula County, west of the village of Jefferson. It is bounded on the north by a wooded ravine through which Cemetary Creek flows; on the south, by open fields and the Ashtabula County fairgrounds; on the west, by a wooded area and baseball fields; and on the east, by Poplar Road and the fairgrounds. (See Figure 2-1)

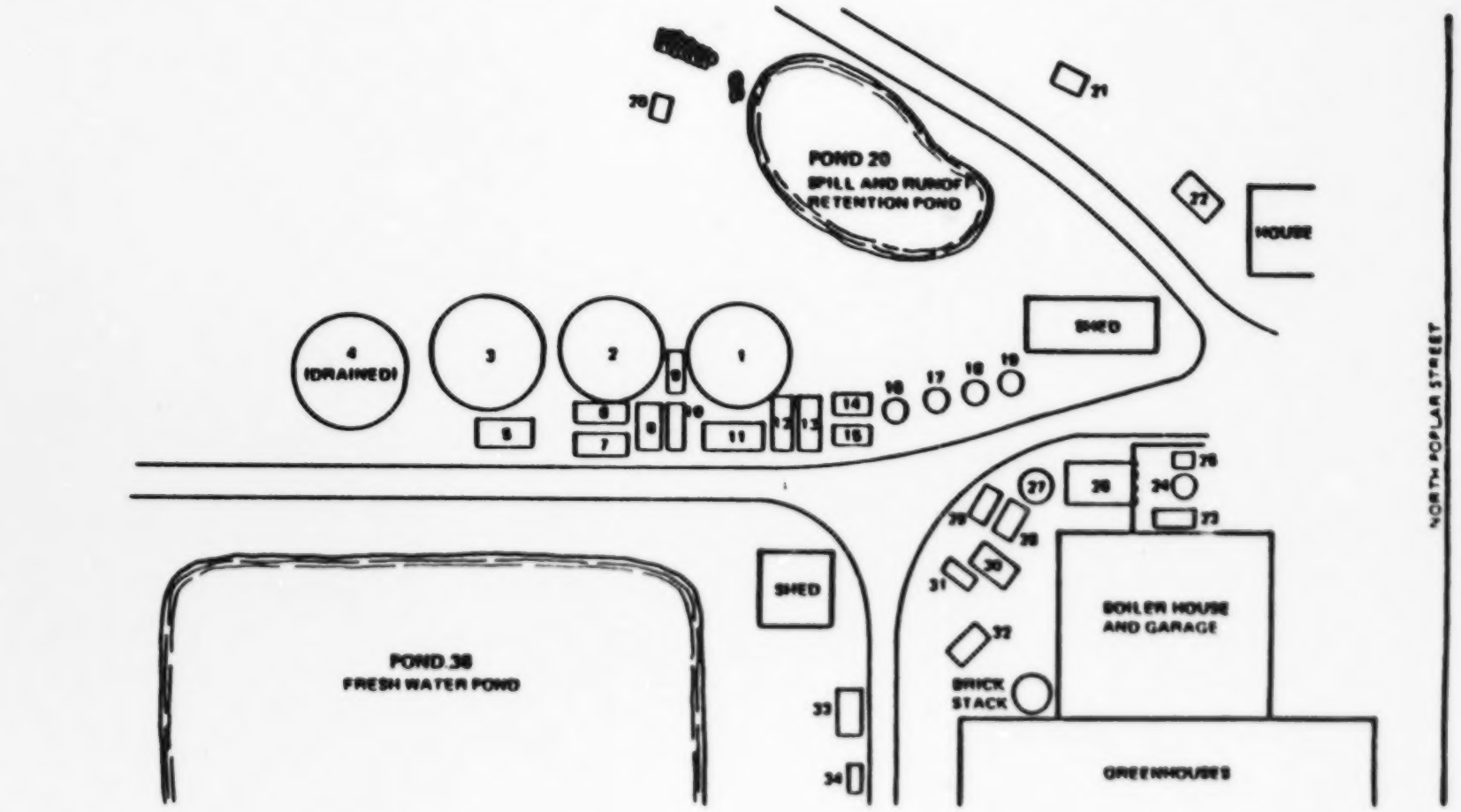
The site contains the residence of Mr. Alvin Laskin, owner of the property; a series of greenhouses; four boilers used to heat the greenhouses; a boiler stack; approximately thirty-six storage tanks; one retention pond; a freshwater pond; and miscellaneous buildings and sheds. Approximately 450,000 gallons of oil and water-oil mixtures are stored in the tanks.

SITE HISTORY

The greenhouses on the Poplar Oil Company site were in operation for about 80 years. Approximately 30 years ago, boilers were installed to heat the greenhouses. During the 1960's storage tanks were installed to hold waste oil to fire the boilers. The oil was not analyzed before acceptance, and oil containing PCB's phenols, and other hazardous substances was accepted. When the greenhouse business deteriorated, the owner began picking up, reselling, and disposing of waste oil. The company's activities also included oiling roads in Ashtabula County and a nearby horse racing track. Through a series of legal actions, the company is now in receivership, and all on-site business activities relating to oil have essentially stopped.

Past Federal cleanup activities have resulted in the mitigation of the most imminent health hazards. Several emergency actions were taken after the site's contamination was discovered and during critical periods such as mudslides and flooding. Superfund Planned Removal cleanup actions removed 302,000 gallons of waste oil for incineration; treated and released 430,000 gallons of contaminated water; and solidified 205,000 gallons of sludge which was placed in Tank No. 4. Also, a cover was built onto Tank No. 3 and the north wall was removed from pond 18. (See Figure 2-3) These actions were accomplished between July and November 1982.

FIGURE 2-1
VICINITY MAP
LASKIN/POPLAR



NOT TO SCALE

SOURCE: State of Ohio Office of Attorney General

FIGURE 2-3
COMPANY SITE
LASKIN POPLAR OIL

CURRENT SITE STATUS

The liquids on the site are characterized as:

Oils with PCB Content of 50 ppm or Greater

- Approximately 250,000 gallons total are contained in 3 tanks.
- Other priority pollutants and metals are also in the PCB oil including: carcinogenic volatile organic compounds, carcinogenic and noncarcinogenic base/neutral compounds, phenol, and potentially toxic metals.
- The main component is waste oil with an estimated heating value of 18,000 Btu per gallon.
- The oil also contains suspended solids.

Oils With PCB Content of Less Than 50 ppm

- Approximately 100,000 gallons are in 24 tanks.
- Other characteristics are the same as for the oils with greater than 50 ppm of PCB, including the volatiles, base/neutral compunds, phenol, and metals.

Contaminated Water

Approximately 100,000 gallons of water with high suspended solids and bottom sludges are in Tank No. 3. An oil sheen can be observed on the water surface.

Discussion

The presence of these liquids is a potential health hazard and is a logistics barrier to the further investigation of the site and an evaluation of final remedial actions.

There is a continuing potential for health and environmental hazards from the presence of the liquids on site. Release of the contaminated liquids would pose a public health and environmental threat.

The most obvious and immediate threat is from contamination entering Cemetery Creek. A fire would probably be accompanied by a spill releasing some or all of the substances.

Cemetery Creek runs along the northern edge of the property. Runoff or seepage into the creek may be contaminated by the existing conditions at the site. Cemetery Creek flows into the Grand River, which is the main drinking water supply for nearly 25,000 people in Ashtabula County.

Discharge of contaminated oil and waste to Cemetery Creek may have already introduced PCB's into the aquatic ecosystem. Since PCB's are fat soluble, the potential exists for concentration in the aquatic food chain and eventually into the human system. Bioconcentration factors for PCB's in fish range from about 3,000 to 274,000. Some wildlife species (mink) are more sensitive than humans, and the present EPA criterion is based on the bioconcentration in salmonid fish and toxicity to mink.

Contamination of Cemetery Creek could lead to ingestion of PCB's and other contaminants. This could occur either by contamination of drinking water supplies or by ingestion of contaminated fish.

Some of the organic contaminants are bioconcentrated. Examples are the higher molecular weight polynuclear aromatic hydrocarbons (PAH's) such as phenanthrene, naphthalene, anthracene, and pyrene. These compounds could be ingested by humans and wildlife eating contaminated fish.

With these potential health hazards continuing as long as the liquids are on site and the logistics block they present to further progress toward an eventual remedial action, it is considered both necessary and prudent that the liquids be removed from the tanks at the earliest practicable time.

ENFORCEMENT

Litigation concerning environmental problems at this site has been on file in both state and federal courts since early 1979. The only defendants currently involved are Alvin Laskin and several corporations set up by him. Laskin and Poplar Oil Company are subject to consent decrees in both state and federal proceedings, but are effectively judgement proof.

U.S. EPA has identified some 100 potential responsible parties (PRP's) who either transported or consigned waste material to the site. These include a broad spectrum of firms, including both large and small organizations. Notice and demand letters have been sent to each, beginning in about April 1982. U.S. EPA divided the PRP's into first and second tiers, based on volume of waste sent to the site, and negotiated for about 8 months with the first tier group. No acceptable offer was forth coming, and it is not believed that further negotiations will prove fruitful.

A referral is currently pending at the Department of Justice seeking recovery of a discrete unit of costs incurred to date at the site (some $1.6 million of CWA § 311 and CERCLA § 104 funds) spent in emergency or Planned Removal actions.

It is unlikely that PRP action will be forthcoming in voluntary negotiations. As a result, the program office will be sending out unilateral CERCLA § 106 orders to four or five PRP's who can be directly linked to materials found at the site. In this manner we will determine whether there will be any PRP response.

COMMUNITY RELATIONS

A press release was issued on May 10, 1984 which announced the availability of the Focused Feasibility Study for review at libraries in Jefferson and Ashtabula, Ohio. Copies were also mailed to interested people including Congressman Eckart and Senator Metzenbaum. The public comment period was from May 13 to May 27, 1984. There were no responses received as a result of this public comment period.

ALTERNATIVES EVALUATION

The evaluation of a limited number of alternatives is controlled by the following practical and regulatory constraints:

1. Essentially complete removal from the environment of all liquids (oil and water) is required to mitigate the potential hazard to public health. Pond 20 will need to remain as a catch basin until all contaminated sludges and soils are adequately controlled.

2. The provisions of 40 CFR 761 (31 May 1979) regulate the disposal of all PCB containing liquids. At or below 50 ppm PCB, liquids are non-regulated, except for uses resulting in direct, wide spread contamination. Above 50 ppm PCB, disposal is regulated and defined. Mixing, or dilution of clean and dirty oil is not permitted to achieve a lower PCB concentration to avoid the regulations.

3. Water to be discharged to Cemetery Creek must meet criteria specified by the Ohio EPA.

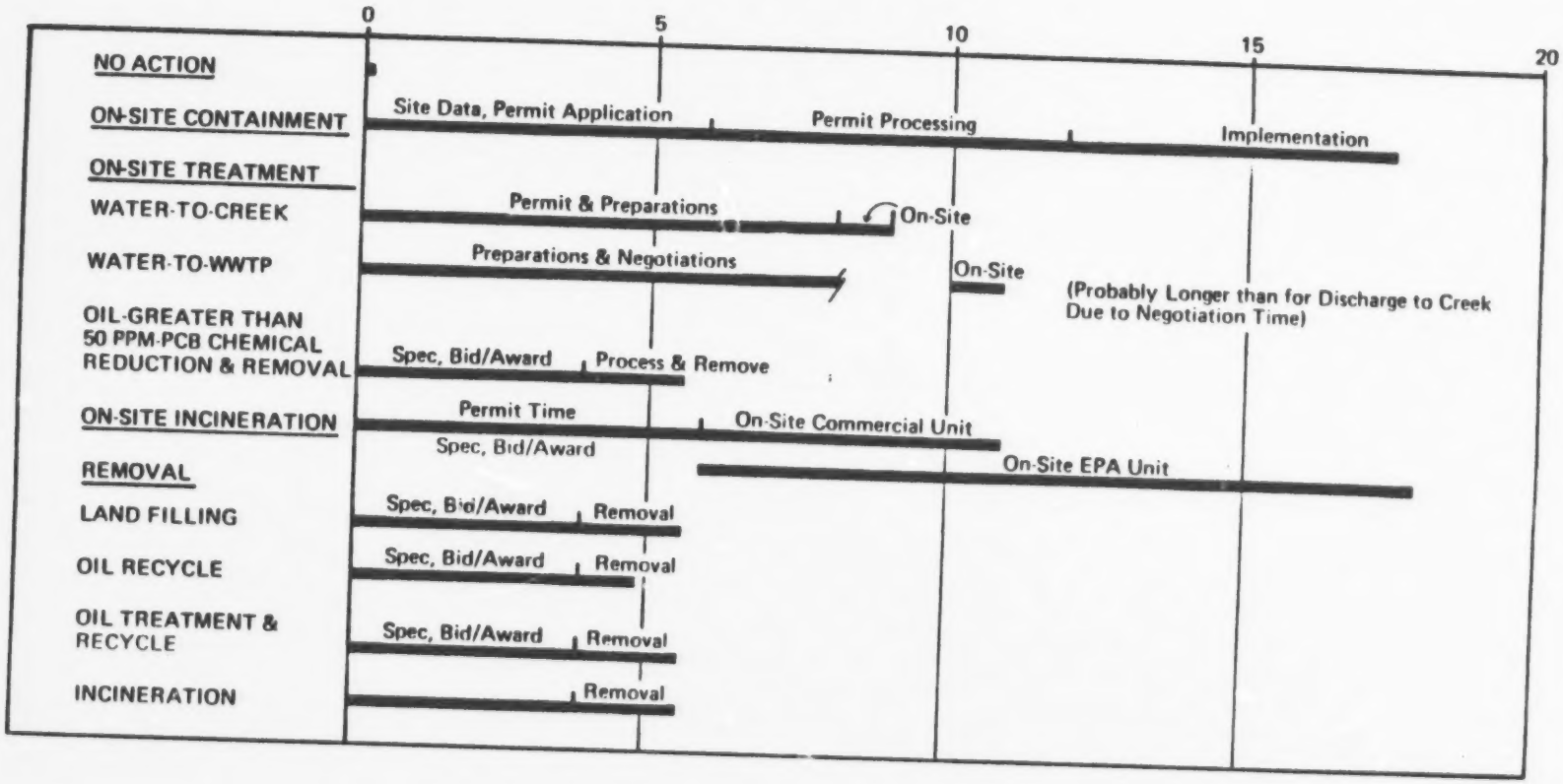


TABLE 2
Comparative Time Lines – Months from Authorization to Implement

Different removal alternatives will apply to the liquids depending on the handling and disposal regulations. Three categories of liquids are therefore considered separately.

- PCB contaminated oil: 50 to 500 ppm PCB concentration.
- Low PCB contaminated oil: detectable to less than 50 ppm PCB concentration.
- Contaminated wastewater: Low level PCB, high suspended solids, oil and grease, and unknown metals concentrations.

Alternatives considered were no action, onsite containment, onsite treatment, onsite incineration, and removal offsite for final disposal.

A. NO ACTION

Public health considerations have ruled out a "no action" alternative for the liquids. Even deferring liquid removal until a future full Remedial Action is considered not prudent. The endangerment aspects of this alternative were discussed in the current Site Status of this report. The oils are flammable and if a fire started a health hazard could exist due to the combustion products or through volatilization of hazardous substances from the site. The potential for spillage to Cemetary Creek exists which could contaminate the water supply for 25,000 people in Ashtabula County. The environment also could suffer significant degredation from a spill into Cemetary Creek.

B. ONSITE CONTAINMENT

The liquid wastes could be stabilized and buried onsite. Stabilization would require the oil or water to be pumped from the storage tanks and mixed with a binding agent to form an inert cement-like product. The stabilized material would then be transferred to a truck prior to solidifying and transporting to a burial area onsite. A contractor specializing in solidification would be utilized for the actual mixing, stabilization, and transport to the burial site. This process may produce noxious odors in off-gases which could be a nuisance and possibly present operating problems. Decontamination facilities would also be required to wash the mixing and transporting equipment.

The burial area would have to be designed to meet RCRA and TSCA requirements for hazardous waste disposal since the water and oil contaminants contain regulated materials. The design considered at other hazardous sites and as proposed by regulations has been a double-lined clay, plastic or asphaltic basin with a between-liner underdrain system. The burial site would have to completely contain all materials for a minimum of 30 years and be continuously monitored, secured, and maintained. Therefore, a prolonged and scheduled surveillance and maintenance plan would have to be implemented to constantly protect and identify the integrity of the landfill. A cost summary follows.

Activity	Cost	Basis
Burial Site	$ 360,000	450,000 gallons of liquids stabilized to twice volume equals 4,500 cubic yards; $80/cubic yard for a double-lined landfill
Permitting	102,800	One-year effort 1/2 time for two people; $200 per day per person for labor and $50,000 for travel, field laboratory work, and other expenses and report preparation
Stabilization	675,000	4,500 cubic yards produced at $150 per cubic yard for materials equipment, hauling, and labor
Postclosure O&M	57,000	$5,000 per year (present worth) at 8 percent per year for 30 years
Total	$1,192,000	

The overall schedule for containment would be 18 to 24 months, depending upon the success of the permitting effort.

C. ONSITE TREATMENT

Contaminated Water

The water stored in Tank No. 3 has been characterized as containing a wide variety of metal, PCB's and other organic contaminants. Additional data and bench tests would be required to confirm a detailed process design for onsite treatment. However, it is reasonable to consider that minimum treatment processes would be pH adjustment in the tank with lime and in-place sedimentation followed by sand and then activated carbon filtration. Discharge would be either to Cemetery Creek or to a local wastewater plant. Waste sludges from this process would be packaged and left on site for disposal during the remedial action.

The treated effluent would be held in storage until laboratory analyses indicated compliance with the applicable requirements for release. If compliance was not met, retreatment would be required. NPDES permit standards for discharge to the creek would need to be met. If discharge is to a treatment plant, transport to the plant and a discharge fee would be required.

Care would have to be taken in the handling, pumping, and onsite storage of the water before, during, and after treatment. An accidental spill could result in the possible contamination of soil at or around the storage tank. If the waste is to be transported or pumped to another location onsite, then it could spill anywhere, including Cemetery Creek.

Treatment and discharge to the creek are essentially the process used in the 1980 removal of contaminated water from Ponds 19 and 20. In that operation, approximately 830,000 gallons of water were treated at a cost of about $400,000.

Therefore, the minimum cost for processing about 100,000 gallons of water in 1984 to meet requirements for discharge to the creek is estimated at between $200,000 and $285,000, considering that one-fourth to one-third of the costs would be fixed and not directly related to the volume processed. A cost summary follows.

Activity	Cost	Basis
Fixed Cost	$133,000	Fixed costs (mobilization/ demobilization, labor administration, etc.) at 1/3 of 1980 total cost
Treatment	32,000	Treatment costs for 100,000 gallons at 32 cent per gallon (treatment cost at 2/3 of 1980 total fixed cost)
Permitting	40,000	Pilot studies and permit preparation at 5 man-months plus expenses
Escalation	77,000	Escalation at 10% per year for 4 years for both fixed and treatment costs
Total	$282,000	

If fixed costs were 25 percent of total costs, the estimated cost for treatment would be $249,000. If treatment proceeded well, the onsite operation would take about one month.

Cost for the alternative of onsite pretreatment and discharge of pretreated water to a local wastewater treatment plant would probably be less than for discharge to the creek because it is expected that, if suitable arrangements could be made with a treatment plant, the treatment requirements would be extensive, though not as stringent as for discharge into the creek. Costs for this alternative are estimated as follows:

Activity	Cost	Basis
Pilot Studies	$ 4,000	Two week effort and expenses
Fixed Costs	98,000	One-half of costs for treatment for discharge to creek (includes escalation to 1984)
Treatment	20,000	At 20 cents/gallon treated
Plant Fee	2,000	Preliminary estimate
Total	$124,000	

This estimate is based on the 1980 water treatment overall cost and volume with some adjustments made for escalation and other factors noted above and should be considered as a conceptual estimate only. Approximately one month's time would be required for the onsite operation, and the overall time period would be heavily dependent on obtaining agreement at a treatment plant to accept the wastewater.

Greater Than 50 ppm PCB Oils

If these oils were treated onsite to reduce the PCB concentration to less than 50 ppm, they could be sold as fuel outside Ohio or incinerated at the only permitted incinerator in Ohio.

PCB reduction processes are designed to reduce by chemical means the PCB's into chemically smaller, harmless compounds. The processes are used by electric utilities to clean transformer oils that have residual PCB concentrations. The oils to be treated must be free of suspended material, moisture, and sludges to prevent the sodium-based reactant chemical from blinding or decomposing. There is one commercial process that can reduce PCB-contaminated oil without pretreatment. The vendor is presently treating 100,000 gallons of oil containing paint sludge and PCB's to a level of less than 50 ppm PCB. Their treatment equipment is portable, and treatment is being done onsite in another state. Limited commercial experience exists with this process on PCB-contaminated waste oils, and the technology is still under development.

The costs for onsite chemical treatment to reduce PCB's are summarized as follows:

Activity	Cost	Basis
PCB Reduction	$750,000	250,000 gallons at $3 per gallon--includes operators
Additional Crew	70,000	One month cleanup would require two men to evacuate tanks, clean up, decontaminate, etc.
Lab Costs	15,000	Estimated
Total	$835,000	

A period of 4 to 6 weeks should be allowed for chemical reduction of the PCB's.

Some environmental concerns exist. Onsite pumping, transporting, and treating of wastes could cause spillage or a fire. PCB reduction chemicals (especially elemental sodium) are explosive and could pose a threat if not handled properly. Also, waste sludges generated from either pretreatment of the oils or the process must be disposed of in a safe manner.

Less Than 50 ppm PCB Oils

This type of oil does not require onsite treatment since it can be sold for fuel or incinerated.

D. ONSITE INCINERATION

Contaminated oil could be incinerated and water evaporated onsite by using a portable incinerator. There is one commercially available portable incinerator and one owned by the U.S. EPA. Both incinerators are fully equipped and designed to provide the temperature and residence time required for organics destruction and also to provide flue gas scrubbing and monitoring capabilities.

Ash disposal is a consideration for any onsite incinerator and could be disposed of with the ultimate site cleanup.

Based on estimate from the commercial portable incinerator operator, the cost for portable incineration of the waste oils and water would amount to approximately $1,800,000 at $4 per gallon. It would take 4 to 5 months to set up and incinerate the waste materials with a portable incinerator. Costs for the U.S. EPA incinerator were not estimated but at the estimated treatment rate it would take about 12 months to burn all the oil.

Several environmental considerations should be explored with this alternative: a potential explosion or fire, a spill during the transfer of waste oil, and out-of-specification incineration gases. An explosion is unlikely, but its consequences could environmentally impact the site and its surroundings. A spill could contaminate soil or even enter Cemetery Creek if the waste oil required hauling to another location onsite. There could be instances of out-of-specification incinerator gases; but given the technology and monitoring of the equipment, these should be short-lived.

E. REMOVAL FROM SITE

The contaminated material could be removed from the site by a licensed commercial contractor and disposed in any one or combination of the following alternatives:

- Landfilling
- Oil recycle
- Oil PCB reduction and recycle or incineration
- Incineration

1. Landfilling (All liquid wastes)

There are several landfill sites in the Midwest available for Laskin Poplar site wastes. The one used in this estimate is about 150 miles from the site. Stabilization of the liquids would be done onsite and the stabilized material transported to the landfill. As discussed previously, odor production during stabilization could be a problem.

Landfilling cost estimates are based on information obtained from a local hazardous waste contractor for the stabilization and disposal of water, contaminated oil containing less than 50 ppm PCB's, and oil with greater than 50-ppm PCB's. A preliminary cost estimate for landfilling is summarized as follows:

Activity	Cost	Basis
Onsite Stabilization of Oil and Water	$675,000	Described on page 6.
Transportation	425,000	Estimated at $3.50 per truck mile, 300 mile round trip to landfill, 4,500 cu. yds at 27,000 lb/cu. yd., 15T/load.
Lab Costs	20,000	Estimate
Disposal at Landfill	31,000	Estimated at $5/ton.
Total	$1,151,000	

The estimated cost for landfilling the oil containing greater than 50 ppm PCB's is $640,000. The estimated cost for landfilling the oil containing less than 50 ppm PCB's and water is $256,000 each.

A period of 6 to 8 weeks should be allowed for liquids removal.

Environmental threats posed by this alternative arise from potential accidents during the handling, processing, and transport of the waste materials, and from the landfill as a long-term contamination source.

2. Oil PCB Reduction by Chemical Means and Recycle

A. Less than 50 ppm PCB's

Recycle of waste oil as a fuel is a potential disposal route. Waste oils with PCB contamination of less than 50 ppm can be used as a fuel.

A problem with this disposal alternative is the possibility of inaccurate waste oil manifesting and the potential of the oils being used for asphalting or oil-based spraying, both illegal practices and potential paths into the environment. These waste oils would, therefore, have to be tracked or monitored to assure proper disposal.

The only costs incurred with low PCB oil recycle are the administration of the contract, supervision to observe and monitor the oil off-loading and disposal, and some lab analysis. A summary follows.

Activity	Cost	Basis
Transportation/Recycle	0	Recycler will take at no charge
Supervision	$4,000	Two weeks at $2,000 per week
Lab Costs	5,000	Estimate
Total	$9,000	

B. Greater than 50 ppm PCB's

Chemical treatment may be a possible route for the reduction of PCB contamination levels in oils to less than 50 ppm. This would then allow the oils to be recycled or incinerated. If the costs for PCB reduction are combined with the costs for recycling, the resulting costs can be summarized as follows:

Activity	Cost	Basis
PCB Reduction	$835,000	Described on page 9
Supervision	5,000	Estimate
Total	$840,000	

A period of 4-6 weeks should be allowed for PCB reduction and removal from site.

3. Offsite Incineration

Incineration is a commonly used disposal route for waste oils and even wastewater. Incineration could be contracted with a firm in Ohio for the wastewater and oils with less than 50 ppm PCB's. For oils with greater than 50 ppm PCB's incineration would have to be done out of state. In the case of the oil with greater than 50 ppm PCB's, the incinerator equipment must be designed to meet EPA criteria for furnace temperature and residence time, be fitted with the required air pollution abatement equipment, and be permitted. A cost estimate for incinerating the various wastes is summarized as follows:

Activity	Cost	Basis
Transportation		
Wastewater to incinerator	$ 14,000	90 miles one way at $3.80 per mile and 20 truckloads
Less than 50 ppm PCB oil to incinerator	14,000	Same
Greater than 50 ppm PCB oil to incinerator	105,000	300 miles one way at $3.50 per mile and 50 truckloads
Incineration		
Wastewater	35,000	$0.35 per gallon
Less than 50 ppm PCB oil	35,000	$0.35 per gallon
Greater than 50 ppm PCB oil	750,000	$0.40 per pound, or approximately $3.00 per gallon
Onsite Crew		
Wastewater	70,000	Estimate for all site removal (same as landfilling)
Less than 50 ppm PCB oil		
Greater than 50 ppm PCB oil		
Lab Costs	20,000	Estimate
Total	$1,043,000	

A breakdown of the total estimated cost for incineration is $900,000 for the oil with greater than 50 ppm PCB, and $71,500 each for water and oil with less than 50 ppm PCB.

If the oil containing greater than 50 ppm PCB's is chemically reduced and incinerated the costs are as follows:

Activity	Cost	Basis
PCB Reduction	$835,000	Described on page 9
Transporation to incinerator	34,200	90 miles one way at $3.80 per mile and 50 truckloads
Incineration	87,500	250,000 gallons at $0.35 per gallon
Total	$956,700	

The total incineration cost of all liquids if the greater than 50 ppm PCB oil is chemically reduced is $1,134,700.

Onsite PCB reduction would not offset the cost of incineration but, instead, would increase the total cost for waste incineration.

A period of 6 to 8 weeks should be allowed for liquid removal if each liquid is removed separately. If all are removed at the same time (two contractors onsite), the duration could be half as long. The State of Ohio compiles detailed information on intrastate highway traffic. In 1983 there were 268 highway wrecks or spills that involved trucks. Of that number, 37 were hauling hazardous wastes. Annually, there are approximately 1.2 million placarded truck shipments that include chemicals, fuels, hazardous materials, etc. Recent records show that for the amount of traffic in the state there are relatively few spills involving hazardous materials. Therefore, with reasonable care and precautions, offsite transportation from Laskin Poplar does not seem to pose a significant environmental threat.

Alternatives Evaluation

Each alternative was screened based on the following evaluating criteria:

- Cost of implementation
- Availability of technology--availability of commercial equipment, services, or technology that is required to implement an alternative
- Ease of implementation--the relative difficulty required to actually carry out an alternative
- Schedule--the approximate time to implement the alternative
- Environmental consideration--ability of the alternative to meet the short- and long-term environmental requirements and goals established by the U.S. EPA and OEPA.

Onsite containment of oils and water (450,000 gallons) would cost in excess of $1,300,00 and require 18 to 24 months for implementation. This alternative would require operations and maintenance cost for at least 30 years.

Onsite incineration of oils and water would cost about $1,800,000 and would take about twelve months to complete. This alternative would be very unacceptable to the local residents because of the past incineration practices by the owner of the site. Both of these alternatives are ruled out by the high cost and the long time to complete the alternative.

Onsite treatment of the contaminated water followed by discharge to the creek or a wastewater treatment plant would cost substantially more than offsite incineration, with little additional environmental benefit. These alternatives are rejected.

Onsite treatment of the oil containing greater than 50 ppm PCB followed by recycling or incineration in Ohio is competitive with landfilling or incineration outside Ohio on a cost basis. The technology to accomplish this is very new, however, and has been utilized on a very limited basis; the effectiveness of the treatment cannot be assured. The process utilizes hazardous materials including elemental sodium which presents a danger of fire or explosion. Since a fire was a prime concern in the endangerment assessment, the treatment alternative is not considered a viable alternative. As a result of the previous evaluation, neither onsite treatment or disposal of any liquids is considered a viable option.

The contaminated water and the oil above and below 50 ppm PCB can be removed from the site for landfilling. The cost for the contaminated water and oil below 50 ppm PCB is substantially higher than the other alternatives. This alternative doubles the volume of the wastes during the solidification process which must be done on site. Some of the wastes are very persistent and will remain in the landfill for an extended period and could cause environmental damage in the future.

The cost to incinerate the oil above 50 ppm PCB is $260,000 more than landfilling but this process destroys the hazardous substances including the PCB's, eliminating the future threat posed by them. The benefits derived far outweight the additional cost.

The below 50 ppm oil could be recycled but this presents management problems in assuring that the oil does not cause additional problems elsewhere. By incinerating the oil with the contaminated water the cost is comparable with pretreatment and discharge to a wastewater treatment plant and recycling of the oil. (See Table 1 and 2)

RECOMMENDED ALTERNATIVE

The recommended alternative as evaluated under 40 CFR Part 300.68(j) is incineration for all three components: contaminated water, oil above 50 ppm PCB and oil below 50 ppm PCB. This alternative is very implementable and uses established technology. It eliminates permanently the threat of the hazardous substances to the public health, welfare and the environment. This is the most cost effective solution to the problem when considered over the long term.

CONSISTENCY WITH OTHER ENVIRONMENTAL LAWS

The recommended alternative is in full compliance with 40 CFR 761 which regulates the disposal of liquids containing PCB. This alternative provides a permanent solution to the problem within the guidance of this regulation. The recommended alternative is also consistent with all other agency laws and regulations.

ALTERNATIVE COSTS

Alternative	Thousand $ Water	Oils With Less Than 50 ppm PCB's	Oils with Greater Than 50 ppm PCB's	Total
Landfilling Offsite	256	256	640	1,152
Onsite Pretreatment Disposal at Local Wastewater Plant	124	--	--	NA
Oil Recycle	NA	9	NA	NA
PCB Reduction/Oil Recycle	NA	NA	840	NA
Incineration Offsite	71.5*	71.5	900	1,043
PCB Reduction/Incineration Offsite	NA	NA	957	NA
* Containment Onsite	288	288	722	1,298
* Incineration Onsite	400	400	1,000	1,800

*Costs are contingent upon all three phases being disposed of by this option

TABLE 1